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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,764	06/13/2006	Dominique David	292034US2PCT	6673

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EXAMINER	
NGHIEM, MICHAEL P	
ART UNIT	PAPER NUMBER
2863	

NOTIFICATION DATE	DELIVERY MODE
03/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/582,764	DAVID, DOMINIQUE	
	Examiner	Art Unit	
	MICHAEL P. NGHIEM	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-18* is/are allowed.

6)☒ Claim(s) *10-15 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Amendment filed on December 11, 2007 has been acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 19, "the thus measured acceleration of gravity is suppressed to determine the acceleration of the solid" is not described in the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Foxlin (US 5,645,077).

Regarding claim 10, Foxlin discloses a method (Fig. 1) for measuring movement of a solid, in which at least one first translation (orientation, Abstract, line 2) of the solid is measured (Abstract, lines 1-4), the method comprising:

- a series of measuring acceleration of the solid (Abstract, lines 4-6) and making double integration of the measurements, to obtain successive values of the first translation (column 2, lines 39-41; column 6, line 49);

- a series of absolute measurement of at least one second degree of freedom of the solid, the second degree of freedom being a rotation, by at least one rotation sensor (via rotational sensors, Abstract, lines 4-5);

- converting the measurement of rotation (angular rate, column 3, lines 64-65) into a measurement of translation (orientation signals, column 3, line 63) (column 3, lines 63-65); and

- using the translation measurement to update the first translation (orientation signals update orientation of body, column 3, lines 54-61).

Regarding claim 11, Foxlin discloses the measurement of the second degree of freedom is used as an initial condition to obtain by double integration a value of the first

translation that follows previously obtained values of the first translation (column 2, lines 36-41).

Regarding claim 12, Foxlin discloses each absolute measurement is made at a same time as a measurement of the acceleration of the solid (rotational acceleration, Abstract, lines 4-6).

Regarding claim 13, Foxlin discloses the converting the measurement of rotation into a measurement of translation uses kinetic models of the solid and/or of movement of the solid (simulate motions, column 15, lines 15-17), enabling determination of relationships between the rotation and translation (orientation signal corresponds to rotation, column 4, lines 38-39).

Regarding claim 14, Foxlin discloses the rotation sensor is chosen from among accelerometers and magnetometers (acceleration sensor, Abstract, lines 4-5).

Regarding claim 15, Foxlin discloses the first translation is measured using a translation sensor that is also the rotation sensor (rotational sensor, Abstract, lines 4-5).

Allowable Subject Matter

Claims 16-18 are allowed.

Reasons For Allowance

The **combination** as claimed wherein a criterion of slowness of movement is chosen, and if the movement meets this criterion after one of the measurements of the second degree of freedom, the measurement of the second degree of freedom obtained is used to update the first translation (claim 16) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

Applicant's arguments filed on December 11, 2007 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that Foxlin does not teach or suggest converting a measurement of rotation into a measurement of translation and using a translation measurement to update a first translation. In Foxlin, the angular rate is not converted to a translation and used to update a first translation but, rather, a corresponding orientation signal relative to the external frame is generated from the angular rate.

Examiner's position is that, as acknowledged by Applicants, Foxlin discloses "a corresponding orientation signal relative to the external frame (column 3, lines 63-64) is

generated from the angular rate (column 3, lines 64-65)". The orientation signal can represent a translation measurement because both the terms "orientation" and "translation" have meanings related to movement (see Answers.com Dictionary). Foxlin defines "orientation" as a movement, "a rotational alignment relative to an external reference frame" (column 2, lines 4-6). Thus, Foxlin discloses converting the measurement of rotation (angular rate, column 3, lines 64-65) into a measurement of translation (orientation signals, column 3, line 63) (column 3, lines 63-65). Further, as discussed above, Foxlin discloses using the translation measurement to update the first translation (orientation signals update orientation of body, column 3, lines 54-61).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael P. Nghiem/

Primary Examiner, GAU 2863

February 20, 2008